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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,471	06/27/2001	Masakazu Ogasawara	041514-5130	1389
55694	7590	09/13/2006	[REDACTED]	EXAMINER
DRINKER BIDDLE & REATH (DC)				PSITOS, ARISTOTELIS M
1500 K STREET, N.W.				
SUITE 1100			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20005-1209			2627	

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/891,471	OGASAWARA ET AL.	
	Examiner	Art Unit	
	Aristotelis M. Psitos	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 01 June 0628.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 and 7 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,7 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.

 | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' response of 6/28/06 has been considered with the following results.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamakawa et al further considered with Ichimura et al both further considered with EP 0814465 and all finally considered with Hector et al.

The references to Yamakawa et al and Ichimura et al are relied upon for the reasons of record.

The newly cited EP document, provided by applicants, relate to equations known to those of ordinary skill in the art relating ct (cross talk) with various parameters – see page 4, starting at line 2 to page8 line 46. With respect to claim 7, the examiner concludes that such a desired result (3%) or lower distortion is yielded from the above noted dimensions for the normalized detector.

It would have been obvious to modify the base system of Yamakawa et al and Ichimura et al with the above parameters disclosed in the EP document and derive the recited formula.

The claim has now been amended to include a particular range for the spacer. Such a range is well known and is taught by the Hector et al reference –see col. 3 lines 60-63.

It would have been obvious to modify the above-modified system with such a teaching, motivation is to use/take advantage of already defined thickness ranges established in the prior art. Such modification permits the manufacturer to save valuable resources in experimentation with undefined ranges.

Response to Arguments

Applicant's arguments with respect to claims 1 and 7 have been considered but are moot for the new grounds of rejection as stated above and additionally for the following reasons.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Furthermore, applicants argue that modification of the NA of the base reference would be inconsistent with that of the range disclosed in Yamakawa due in part to applicants' decision of narrowing the range predicated upon

"the basis of the focus-servo capture range and interlayer crosstalk in the pickup device with the optics having a NA of 0.85 or more".

In response to this, no such requirement is found in the claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Furthermore, the examiner has provided reasoning as to why such a variation in NA would flow from the references.

Again, the examiner is not persuaded. The passages noted by applicants and reviewed by the examiner lead the examiner to conclude the sizes mentioned,(see for instance at column 18, lines 4-21: 16, 10,4 and 2 μm is the measurement along one axis, either the x or y axis, and that in order to yield applicants' claimed squared parameters (μm^2) , one would multiple two dimensions. That is the examiner interprets the detectors as squares having both their x and y axis the same value – such as 16,10, 4 or 2 or 6, or 8 μm would yield values appropriately – 256, 100, 16, 4, 36,64 (μm^2). Since these values overlap the claimed values and in keeping with *In re Peterson* (cited in previous OA), this argument is not persuasive.

With respect to the lack of motivation/ hindsight arguments, applicants' attention is drawn to MPEP § 2144, note in particular that the rationale to modify or combine does not have to be expressly stated in the prior art – see *In re Fine, 837 F.2d 1071, 5 USPQ 2nd 1596*, as well as the other citations.

The examiner has presented a line of reasoning which meets the above requirement(s) or a 103 rejection.

Claim Rejections - 35 USC § 103

3. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al further considered with either by Narahara et al or Ichimura et al all further considered with the EP 0814465 and finally all further considered with Hector et al.

The following analysis is made:

Claim 1	Nakano et al
A pickup device of an apparatus for recording or reproducing information, by irradiation of a light beam, to and from a multi-layered recording medium having a plurality of recording layers laminated through spacer layers,	see the abstract, and summary of the invention figure 1
wherein each of said spacer layers of the multi-layered recording medium has a thickness of 10µm to 30 µm,	see Hector et al, col. 3 lines 60-63
the device comprising:	
an illumination optical system including an objective lens for focusing a light beam onto any of said recording layers of said multi-layered recording medium; and	in fig. 1 element 43 is the objective lens, the medium is multi-layered
a detecting optical system including a photodetector for	in the above figure, the

Art Unit: 2627

receiving and photo electrically converting reflection light from
said recording layers of said multi-layered recording medium
through said objective lens;

detector is element 61
see figure 3 as well.

wherein said photodetector has a normalized detector size:
(B/β) of a size of 10 to 50 μm based on a predetermined
focus-servo capture range and interlayer cross-talk

see col. 6 starting at
line 6, range given as
3-16 μm

wherein the normalized detector size (B/ β) is given
by an equation of:

$$(B/ \beta) = L / (f_0 / f_{ob})$$

wherein L denotes a size of one side of the photodetector,
f₀ denotes a focal distance of the detecting optical system and
f_{ob} denotes a focal distance of the objective lens,
wherein said objective lens has a numerical aperture
of 0.85 or greater.

see EP document

NA value see.

refs. to

Narahara et al or Ichimura et al.

In the above Nakano et al system, the ability of having plural recording layered medium
appropriately focused and subsequently detected is discussed – see col. 5 starting at line 18.

Furthermore, as also found in col. 6 lines 6 plus, the ability of sizing the detector accordingly is
discussed – including the claimed “normalization” thereof.

It is the EP document to Takahashi describes the above claimed formulas as part and parcel of
the subject matter known to those in this environment.

With respect to the ability of altering the NA, i.e., increasing such so as to decrease the spot size
and thereby permit even denser recording capabilities is taught/discussed in the article by Narahara et al

Art Unit: 2627

or the previously cited patent to Ichimura et al teach such a NA value in this environment for the desired increased disc capacity.

It would have been obvious to modify the base system of Nakano et al with the above teaching from either of these secondary references, motivation is as taught to increase the disc capacity.

With respect to the parameters discussed in the formula, again the EP document is relied upon for the reasons stated above.

It would have been obvious to modify the base system of Nakano et al/Narahara or Ichimura et al with the above mathematical parameters/relationships discussed in the EP document and derive the formula parameters recited. The examiner concludes that such is an exercise in mathematics, and obvious to one of ordinary skill in the art.

With respect to the newly inserted limitations focusing upon the thickness range for the spacer layers, such a range for spacers is known in this environment as further discussed by Hector et al, see col. 3 lines 60-63.

It would have been obvious to further modify the above reference with such an additional teaching, motivation is to take advantage of existing parameters known in the environment and hence reduce unwanted experimentation in developing new thickness ranges.

With respect to the range recited, it is noted that Nakano et al discloses a overlapping range of 3-16 μm . Obviously this is a range of 9 to 256 μm . Since these values overlap the claimed range, and in keeping with In re Peterson, 65 USPQ 2nd 1379, such is met or an obvious modification in order to optimize the system parameters, in this case the size of the detector.

With respect to the lack of motivation/ hindsight arguments, applicants' attention is drawn to MPEP § 2144, note in particular that the rationale to modify or combine does not have to be expressly stated in the prior art – see In re Fine, 837 F.2d 1071, 5 USPQ 2nd 1596, as well as the other citations.

The examiner has presented a line of reasoning which meets the above requirement(s) or a 103 rejection.

Art Unit: 2627

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M. Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-F: 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Aristotelis M Psitos
Primary Examiner
Art Unit 2627

